REMARKS

Reconsideration and allowance of the above application are respectfully requested.

As an initial matter, Applicant gratefully acknowledges the Examiner's allowance that Claims 10 and 20 as amended in the Applicant's prior response filed on August 21, 2003.

The Examiner's approval of the proposed amendments to the specification and the drawings as originally filed is acknowledged. Applicant hereby submits a new set of formal drawings to replace the drawings on file and to comply with the examiner's requirement.

Various claims in Claims 1-42 have been amended, including Claim 5 which has been amended to overcome the lack of antecedent basis. Claims 43-62 have been newly added and are fully supported by the original specification. Hence, upon entry of the above amendment, Claims 1-62 are pending and under consideration. All pending claims are patentable as explained in the following remarks.

Rejections under 35 USC 112, Second Paragraph

Claims 30-37 and 41 stand rejected as being indefinite. These rejections are either overcome by amending the claims or traversed. All these rejections should be withdrawn.

Claims 30 and 41 have been amended to delete the word "optically" in order to overcome the rejections.

Claim 35 has been amended to correct typographical errors and to clarify its language. This amendment also overcomes the rejection for lack of proper antecedence basis.

With respect to Claim 41, the rejection is traversed. The office action contends that "the second electrical control signals" lacks proper antecedence basis. However, the office action improperly reads "the second electrical control signals" out of its context by incorrectly neglecting the phrase of "the first" that is in front of the separated phrase of "the second electrical control signals."

More particularly, in its original written form of Claim 41, the phrase of "the first and" and the phrase of "the second electrical control signals" must be read together as a single phrase of "the first and the second electrical control signals" to mean, equivalently, "the first electrical control signal and the second electrical control signal" in an alternative form. Therefore, it is respectfully suggested that Claim 41 in its original form has the proper antecedence basis and the rejection should be withdrawn.

Rejections under 35 USC 102(b)

Claims 1-4 and 13-15 stand rejected as allegedly being anticipated by a newly cited reference Cisneros. This contention, however, is respectfully traversed because Cisneros fails to teach or suggest each feature in these claims.

The Office Action at page 3 contends that Cisneros teaches "various methods for resolving wavelength contention" in optical WDM systems and cites FIGS. 1, 10 and 7, and corresponding textual description as support for the rejections. Upon careful review of Cisneros, Applicant finds the contention of the Office Action is puzzling because Cisneros is generally related to an electronic ATM switch and has little to do with resolving the optical wavelength contention in optical WDM communications.

The Office Action apparently seizes on the term "photonic contention resolution" discussed in Cisneros and interpret this term to mean resolving the wavelength contention in optical WDM communications. This, however, appears to be based on incorrect understanding of the technology in Cisneros and thus is inconsistent with the disclosure of Cisneros.

More specifically, the entire disclosure of Cisneros is about resolving the contention in the output buffers of a buffered ATM switch. In the words by Cisneros in column 1,

lines 23-34, this output buffer contention arises as follows (emphasis added):

> *Input buffered ATM switches, and some types of switches using a combination of input and output buffering, require a device to resolve output buffer contention. Output buffer contention results when there are more packets destined to an output buffer than the switch can transport in a cell cycle time. In a packet switch, output buffer contention is a result of the non-deterministic nature of packet traffic since traffic to any switch output buffer can come from a number of input buffers. Therefore, some device is needed to arbitrate among the input buffer requests and decide which input buffers will be allowed to transmit a cell through the switch in the next cell cycle time.*

Clearly, this output buffer contention in ATM switches is not related to the optical wavelength contention in optical WDM communications.

The invention described by Cisneros is to use a photonic solution to resolve this output buffer contention in ATM switches. To achieve this, a contention resolution device (CRD) 20 shown in FIG. 1 is provided to be in electronic communication with the input buffers. The CRD 20 first converts the electronic signals from the input buffers of the ATM switch into optical signals by using tunable lasers, then uses a passive optical switch 34 to switch the optical signals, and finally converts the switched optical signals back to electronics

signals by using optical receivers. The output electronic signals from the optical receivers are fed back to the input buffers. Because CRD 20 uses tunable lasers, optical switches, and optical receivers, Cisneros calls its contention resolution a "photonic" contention resolution. Clearly, this has nothing to do with the optical wavelength contention in optical WDM communications.

The Office Action particularly points to FIG. 10 and Column 11, line 60 to column 12, line 35 in Cisneros as allegedly the teachings on in-band wavelength conversion for resolving wavelength contention among packets to support its rejections. This contention is completely at odds with Cisneros. As clearly stated in this part and the entire disclosure of Cisneros, the tunable lasers are used to carry the converted electronic signals from the input buffers and this part of the Cisneros describes tuning each tunable laser to a set of wavelengths within its laser tuning range and the control of wavelength spacings for avoiding undesired destructive optical interference. There is no optical WDM signals in Cisneros and nothing in Cisneros deals with the wavelength contention in WDM signals.

The term "in band" used in present application means within one ITU window in wavelength for optical WDM communications. The CDR 20 in Cisneros has no relationship with optical WDM communications. As such, it is not surprising that Cisneros is completely silent on such "in band" optical channels within one ITU window and other features in the present claims.

Therefore, Applicant respectfully submits that Cisneros is not related to the technical features in the combinations of Claims 1-4 and 13-15 and thus fails to teach Claims 1-4 and 13-15. Claims 1-4 and 13-15 are distinctly different from and are patentable over Cisneros.

Rejections under 35 USC 103(a)

Claims 5, 6-8, 16-18, 9, 19, 11, 21, 12, 22, 23, 24-29, 30, 31, 32-34, 35-37, 38-39, 40, 41, and 42 stand rejected as allegedly being obvious over Cisneros as applied in the rejections to Claims 1-4 and 13-15 in view of one or more other references by Boncek, Admczyk, Masetti, Takeyari, Frigo, Spring, Chao, and Sun. Applicant respectfully traverses each of these rejections.

As discussed above, the primary reference Cisneros completely fails to provide any disclosure on the features the Office Action alleges. The above arguments with respect to

Cisneros on Claims 1-4 and 13-15 can be made for other pending claims. In each of the rejections under 35 USC 103(a), the Office Action cites one or more additional references to teach additional features that the Office Action deems to be absent from the primary reference Cisneros. Therefore, each of the suggested combinations of these references do not teach or suggest each feature of the claims rejected under 35 USC 103(a). In addition, at least some of these suggested combinations with Cisneros are improper and accordingly the rejections are improper.

For at least these reasons, Claims 5, 6-8, 16-18, 9, 19, 11, 21, 12, 22, 23, 24-29, 30, 31, 32-34, 35-37, 38-39, 40, 41, and 42 are distinctly patentable under 35 USC 103(a).

The newly added Claims 43-51 are patentable based on the above arguments and on their own merits. The newly added Claims 52-55 are patentable based on their dependence on allowed Claims 10 and 20 and on their own merits.

The newly added claims 56-62 are fully supported by FIG. 4 of the original specification and related textual descriptions. These claims are patentable over the cited prior art because the cited references on record, either individually or collectively, fails to disclose the claimed combinations.

In summary, the new grounds of rejections based on newly cited prior art in the office action have not met the burden of prima facie showing of unpatentability due to lack of support for the rejections in the newly cited prior art. In addition, the cited prior art references, either individually or collectively, fail to disclose the combinations recited in Claims 1-62. Therefore, all pending claims, Claims 1-62, are now patentable and the application is in full condition for allowance. An official notice of allowance is respectfully solicited.

Enclosed is a check for $433 for fees of additional claims and an extension of time for two months.

Please apply any other applicable fees or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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